

LISTING OF CLAIMS

The current status of the claims, including the presently proposed amendments, is as follows:

1-20. (Canceled)

21. (Currently Amended) Method for effecting computer implemented decision-support in
5 selection of a drug therapy of patients having a viral disease, comprising ~~providing~~ using a rules
database, providing an input of patient data including genotype data on the viral genome of the
viral disease, wherein the rules database comprises a number of associated rules for each available
drug for treatment of the viral disease, each rule indicating the suitability of the drug for treatment
of a specific viral genotype, entering the patient data into the rules database, the database providing
10 an output of drugs suitable for therapy, and displaying the drugs suitable for therapy in a ranking in
accordance with their suitability indication, for selection, wherein the suitability indication of the
rules is based on at least a combination of a first value indicating the resistance level of the
genotype for the drug and a second value indicating the confidence in the first value.
- 15 22. (Previously presented) Method according to claim 21, wherein the suitability indication is
based on at least a combination of the first and second values and clinical experience.
23. (Previously presented) Method according to claim 22, wherein the clinical experience
comprises the outcome of clinical studies relating the presence of substitutions at start of therapy
20 directly to clinical or virological outcome.
24. (Previously presented) Method according to claim 21, wherein the second value can
indicate as confidence level suggestive evidence, proven in vitro or proven in vivo.
- 25 25. (Previously presented) Method according to claim 21, wherein the suitability indication of
the rules is based on at least a first value indicating the resistance level of the genotype for the drug
when present at a certain drug level in a patient.
- 30 26. (Previously presented) Method according to claim 25, wherein the first value is a function
of the drug level, wherein an expected drug level in the patient is further provided and entered in
the database.
27. (Previously presented) Method according to claim 26, wherein the expected drug level is
based on a patient-specific drug level measurement.

28. (Previously presented) Method according to claim 25, wherein two or more drugs or combinations of drugs with equal suitability indication are ranked relative to one another according to the drug levels on which the rules for the drugs are based.

5 29. (Previously presented) Method according to claim 21, wherein the database further comprises a rule for a drug available for treatment, the rule indicating the suitability of the drug for treatment of a specific viral genotype when the drug is taken in combination with another drug, wherein the combination of the drugs is displayed in the ranking with the individual drugs according to the suitability indication for the combination.

10 30. (Previously presented) Method according to claim 29, wherein the rule is based on the effect of the other drug on the level of the drug in a patient.

15 31. (Previously presented) Method according to claim 21, in particular for use with HIV patients, wherein the rules database comprises rules for different protein substitutions.

32. (Previously presented) Method according to claim 31, wherein the rules database comprises rules for protease (P) substitutions and reverse transcriptase (RT) substitutions.

20 33. (Previously presented) Method according to claim 21, wherein the drugs available for therapy are displayed as output from the database in different categories in accordance with the type of drug activity.

25 34. (Previously presented) Method according to claim 33, wherein the type of drug activity includes protease inhibitor, nucleoside RT inhibitor and non-nucleoside RT inhibitor.

35 35. (Previously presented) Method according to claim 21, wherein the patient data input comprises the clade of the virus, wherein the clade is used in the step of selecting a suitable drug therapy.

30 36. (Previously presented) Method according to claim 35, wherein the entered genotype data is used to determine the clade of the virus.

35 37. (Previously presented) Method according to claim 21, wherein the patient data input comprises a drug therapy as current treatment, wherein in the display of the drugs it is indicated at each drug if the same is used in the current treatment.

38. (Previously presented) Method according to claim 21, wherein a database of reference articles on one or more of the drugs available for treatment is provided, wherein a list of reference articles can be displayed by entering a request on a given drug, preferably by double clicking on a drug name displayed, the list containing articles supporting the suitability of the drug for treatment of the viral disease with the entered genotype data.

39. (Previously presented) Method according to claim 21, wherein a classification of the genotype data of the viral genome can be indicated, wherein the rules database is used to classify the genotype data at least as relevant or not to assessing the suitability level of the drugs.

40. (Previously presented) Method according to claim 39, wherein the genotype data comprises data on substitutions in the viral genome, wherein each substitution can be classified into three categories, wherein the first category indicates relevant to drug resistance, the second category indicates that the substitution is known, but not known to affect drug resistance, and the third category indicates that the substitution is not reported to have an effect on drug resistance.

41. (Previously presented) Method according to claim 21, wherein the computer and database are accessible via a web-site.

42. (Previously presented) A computer program device readable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 21.

43. (Previously presented) Computer program carrier, comprising a computer program in a format downloadable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 21.

44. (Previously presented) Method for effecting computer implemented decision-support in selection of a drug therapy of patients having a viral disease, comprising providing a rules database, providing an input of patient data including genotype data on the viral genome of the viral disease, wherein the rules database comprises a number of associated rules for each available drug for treatment of the viral disease, each rule indicating the suitability of the drug for treatment of a specific viral genotype, entering the patient data into the rules database, the database providing an output of drugs suitable for therapy, and displaying the individual drugs suitable for therapy in a ranking in accordance with their suitability indication, for selection, wherein the database further comprises a rule for at least one certain drug available for treatment, the rule indicating the suitability of the certain drug for treatment of a specific viral genotype when the drug is taken in

combination with another drug, wherein only combinations of drugs are displayed in the ranking with the individual drugs according to the suitability indication for the combination where drugs in the combination influence each other's suitability indication.

5 45. (Previously presented) Method according to claim 44, wherein the suitability indication of the rules is based on at least a combination of a first value indicating the resistance level of the genotype for the drug and a second value indicating the confidence in the first value.

10 46. (Previously presented) Method according to claim 45, wherein the suitability indication is based on at least a combination of the first and second values and clinical experience.

47. (Previously presented) Method according to claim 45, wherein the second value can indicate as confidence level suggestive evidence, proven in vitro or proven in vivo.

15 48. (Previously presented) Method according to claim 44, wherein a rule indicating the suitability of the certain drug for treatment of a specific viral genotype when the drug is taken in combination with another drug, is based on the effect of the other drug on the level of the drug in a patient.

20 49. (Previously presented) A computer program device readable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 44.

25 50. (Previously presented) Computer program carrier, comprising a computer program in a format downloadable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 44.

30 51. (Previously presented) Method for effecting computer implemented decision-support in selection of a drug therapy of patients having a viral disease, comprising providing a rules database, providing an input of patient data including genotype data on the viral genome of the viral disease, wherein the rules database comprises a number of associated rules for each available drug for treatment of the viral disease, each rule indicating the suitability of the drug for treatment of a specific viral genotype, entering the patient data into the rules database, the database providing an output of drugs suitable for therapy, and displaying the drugs suitable for therapy in a ranking in
35 accordance with their suitability indication, for selection, wherein the suitability indication of the rules is based on at least a first value indicating the resistance level of the genotype for the drug when present at a certain drug level in a patient.

52. (Previously presented) Method according to claim 51, wherein the first value is a function of the drug level, wherein an expected drug level in the patient is further provided and entered in the database.

5 53. (Previously presented) Method according to claim 52, wherein the expected drug level is based on a patient-specific drug level measurement.

54. (Previously presented) Method according to claim 51, wherein two or more drugs or combinations of drugs with equal suitability indication are ranked relative to one another according to the drug levels on which the rules for the drugs are based.

10

55. (Previously presented) Method according to claim 51, wherein the database further comprises a rule for a drug available for treatment, the rule indicating the suitability of the drug for treatment of a specific viral genotype when the drug is taken in combination with another drug, wherein the combination of the drugs is displayed in the ranking with the individual drugs according to the suitability indication for the combination.

15

56. (Previously presented) Method according to claim 55, wherein the rule is based on the effect of the other drug on the level of the drug in a patient.

20

57. (Previously presented) Method according to claim 51, wherein the patient data input comprises a drug therapy as current treatment, wherein in the display of the drugs it is indicated at each drug if the same is used in the current treatment.

25 58. (Previously presented) A computer program device readable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 51.

59. (Previously presented) Computer program carrier, comprising a computer program in a format downloadable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 51.

30

60. (Previously presented) Method for effecting computer implemented decision-support in selection of a drug therapy of patients having a viral disease, comprising providing a rules database, providing an input of patient data including genotype data on the viral genome of the viral disease, wherein the rules database comprises a number of associated rules for each available drug for treatment of the viral disease, each rule indicating the suitability of the drug for treatment

35

of a specific viral genotype, entering the patient data into the rules database, the database providing an output of drugs suitable for therapy, and displaying the drugs suitable for therapy in a ranking in accordance with their suitability indication, for selection, wherein the clade is used in the step of selecting a suitable drug therapy.

5

61. (Previously presented) Method according to claim 60, wherein the entered genotype data is used to determine the clade of the virus.

10

62. (Previously presented) A computer program device readable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 60.

15

63. (Previously presented) Computer program carrier, comprising a computer program in a format downloadable by a computer, comprising a computer program executable by the computer for effecting the computer to carry out the method of claim 60.